

ELECTRICAL AUTOMATION SYSTEMS TOWARDS INTELLIGENT AND ENERGY EFFICIENCY APPLICATIONS

Musse Mohamud Ahmed



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APPLICATIONS

Musse Mohamud Ahmed

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CHAPTER 11

SOFTWARE AUTOMATION DEVELOPMENT

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This chapter presents software automation development and consists of application of MHI, Service substation and customer substations tags, trending configurations, math functions, IWS application functions and system programming

11.1 Application Tags of Human Machine Interface(HMI)

This software is based on HMI using specific software called IsaGRAF and this will be integrated to GUI based SCADA using another software called Indusoft at the SCADA side. The two software systems are totally integrated together and operated the substation panel very effectively as shown in the experimental results.

Table 11.1 shows the application tags created in SCADA application for the customer service substations panel.

Table 11.1: Service Substation Panel HMI Application Tags

InduSoft			IsaGRAF
Tag Name	Data Types	Address(Decimal)	Variable Name
buttonsv[0]	Boolean	0004	reset button sv
buttonsv[1]	Boolean	0041	auto state sv
powersv	Boolean	0042	input sv
comm status sv[0]	Boolean	0043	comm sv
comm status sv[1]	Boolean	0044	comm out 1 sv
comm status sv[2]	Boolean	0045	comm out 2 sv
load sv[0]	Boolean	0046	load1 sv
load sv[1]	Boolean	0047	load2 sv
load sv[2]	Boolean	0048	load3sv
load sv[3]	Boolean	0049	load4 sv
load sv[4]	Boolean	0050	load5 sv
load manual sv[0]	Boolean	0053	manual1 sv
load manual sv[1]	Boolean	0054	manual2 sv
load manual sv[2]	Boolean	0055	manual3 sv
load manual sv[3]	Boolean	0056	manual4 sv
load manual sv[4]	Boolean	0057	manual5 sv
st8 add1sv A[0]	Real	0061	cur real 1 sv
st8 add1sv A[1]	Real	0063	cur real 2 sv
st8 add1sv A[2]	Real	0065	cur real 3 sv
st8 add1sv A[3]	Real	0067	cur real 4 sv
st8 add1sv V[0]	Real	0069	volt real 1 sv
st8 add1sv V[1]	Real	0071	volt real 2 sv
st8 add1sv V[2]	Real	0073	volt real 3 sv
st8 add1sv V[3]	Real	0075	volt real 4 sv